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Title: Measuring the Substantive Representation of Women Cross-Nationally: Towards a Composite Index

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Introduction

The inclusion of women and their interests in representative processes constitutes an important indicator of the quality of *democratic* representation (Celis and Childs, 2020; Phillips, 1995). With this in mind, scholars have devoted considerable attention to studying change in women's substantive and descriptive representation (e.g. Paxton, Hughes and Barnes, 2020; Franceschet, Krook and Tan 2019), as well as exploring new analytical and methodological approaches for doing so (e.g. Alexander, Bolzendahl and Jalalzai eds., 2018). One of the central ambitions of this special section speaks directly to this – the guest editors argue in favour of a continued exploration of “what substantive representation entails and how to measure it, also comparatively”. In response to this call, this research note suggests one way forward by introducing the idea of a composite index, which combines two dimensions and eight indicators to measure women's substantive representation in Europe.

Defined by Pitkin (1967: 209) as ‘acting for’-representation, substantive representation requires that representatives articulate the interests of the represented, in a manner responsive to their wishes. Although often linked to other forms of representation, in particular to descriptive and symbolic representation, it is clear that women’s substantive representation distinguishes itself by its ‘active’ nature, which requires representation through deeds rather than identities or symbols. It also requires a close connection between citizens’ preferences and political decisions (Severs 2010).

Yet, despite the significance of substantive representation, the level and quality of women’s substantive representation varies greatly across countries (Escobar-Lemmon et al., 2014; O’Brien and Piscopo 2019). To monitor and encourage lasting change, concrete data and examples of what determines certain levels of gender equality and what can change such levels and in what direction are crucial. The rich comparative literature on substantive representation has already shed light on the various ways in which women’s substantive representation is expressed, as well as the various factors that account for higher/lower levels of substantive representation (Childs and Lovenduski 2013; Clayton et al 2019; O’Brien and Piscopo 2010; Reher 2018; Waylen 2008). In this paper, we contribute to this scholarship by proposing an index that allows to monitor and measure women’s substantive representation in a multifaceted way through the use of a composite measure, which we label the Substantive Representation Index (SRI).

In order to build this SRI, we derive two dimensions and eight indicators of women’s substantive representation from the extant literature and integrate them in a new and unique quantitative composite index. Most notably, the SRI provides a combined statistic reflecting the extent to which women are substantively represented across various political echelons and

contexts. The index has the main advantage that it studies the multidimensional nature of women's substantive representation both in- and outside parliament. Importantly, while we acknowledge the value of extant work, most of which examines trends of women's presence and representation in legislatures (Wängnerud 2009; Anonymized 1), we conceive of substantive representation as a process including multiple activities and 'pushes' which originate in a given society, and not as something that only happens in legislatures. As such, the SRI speaks to studies which argue in favour of a conceptualization of substantive representation that includes acts in and outside parliament by elected and non-elected representatives (Celis et al., 2008; Childs and Krook 2009; Saward 2010; Kuyper 2016), and integrates interest representation and responsiveness in the same model of substantive representation (Severs 2010). Through its reliance on existing comparative datasets, the composite index furthermore limits problems of data availability and comparability, which are often encountered in comparative research on the substantive representation of social groups (Alexander, Bolzendahl and Jalalzai eds., 2018; Anonymized 1).

In what follows, we first discuss existing comparative research on women's substantive representation to define the dimensions of the SRI. Next, we describe the eight indicators of the SRI. In the final part, we return to the promises and pitfalls of the SRI, and discuss future steps.

Dimensions of the Substantive Representation Index

Defining what women's substantive representation is, and how best to achieve it, is subject to considerable debate. Pitkin's (1967: 209) definition – substantive representation as “acting in the interest of the represented in a manner responsive to them” – offers a common starting point

in many comparative studies. Building on this definition, Franceschet and Piscopo (2008) make a further distinction between representing group interests in the political process and developing policy outcomes. Moreover, the complexity of women's substantive representation lies in different debates on what is represented (women's interests as feminist or gendered), where representation takes place (limited to parliament, or extending to other governmental or non-governmental spheres), who represents (descriptive representatives, critical actors, institutional sources), and on whose behalf (mechanisms of accountability and responsiveness)¹. These debates are not yet settled.

Women's interests result from women's lived experiences and social positioning (Phillips 1995; Young 2002). Taking the rejection of any essentialist claim that women share a similar set of interests as a common starting point, (comparative) studies do differ in how they conceptualize women's interests. More precisely, they disagree on whether women's interests should be defined as 'feminist' interests aimed at transforming existing gender roles in support of gender equality and social justice, or whether they should be defined as 'gendered' interests, for instance through their connection with women's material interests or traditional gender roles, which can also be non-feminist (Celis and Childs 2014, Dahlerup 2014; Piscopo 2014; Reingold 2000).

Another debate focuses on whether women's substantive representation requires acts and actors which are located primarily in parliaments, or whether non-parliamentary act(or)s equally qualify. A number of studies prefer the former, and focus on women MPs' policy priorities, voting records, bill (co-)sponsorship, or any other type of parliamentary activity on

¹ We build on the work of many authors here. Due to the word limit in this research note, we add the full list of references in the Online Appendix 1.

behalf of women (for overviews: Lovenduski and Childs 2013; Wängnerud 2009). Others focus more explicitly on the role of non-descriptive representatives (Hömann and Nugent 2022), or study the substantial changes critical actors (Childs and Krook 2009) or equality champions (Chaney 2006) bring in parliament, government (Murray 2008; McBride and Mazur 2010) or political parties (Greene and O'Brien 2016). Still others locate interest representation outside the governmental arena, either in social movements or other 'institutional sources' (Htun and Weldon 2012; Weldon 2002). This ties into representation as a process of 'claims-making', in which both elected and non-elected representatives take part (Saward 2010).

Finally, substantive representation requires citizen's assessment through mechanisms of responsiveness and accountability. Studies focus on 'political' and/or 'policy' oriented responsiveness, i.e. how citizens' preferences connect with either representatives' preferences or policy (Dingler, Kroeber and Fortin-Rittberger, 2019; Reher 2018). There is debate on how to measure congruence between the preferences of citizens and elites (e.g. whether to compare the median preferences of citizens and MPs or distributions of preferences; Golder and Stranski 2010) and whether to take into account the dynamics of change (Soroka and Wlezien 2010). Studies furthermore focus on which accountability mechanisms allow women, either individually or collectively, to evaluate government actions and sanction them accordingly (Celis and Childs 2020; Esarey and Schwindt-Bayer, 2018).

Far from wishing to settle these debates, our own understanding aligns with a concept of substantive representation as a multifaceted phenomenon (Celis et al 2008; Franceschet and Piscopo 2008). We argue that central to this multifacetedness are its two key *dimensions*: (1) interest articulation ('acting in the interest of') and (2) responsiveness/accountability ('in a manner responsive to the represented').

Regarding the first dimension, we consider substantive representation a process of interest articulation, during which a variety of actors (claim to) represent women's interests in the political process. In line with some of the authors mentioned above (e.g. Weldon 2002), we assume that these actors are not only women MPs but also include non-descriptive representatives, government actors, political parties and institutional sources (women's movements; equality bodies). Similarly, the type of activities that count as 'acting for' women can be quite diverse, including party pledges, parliamentary activity, government actions, and collective action. When studying these acts, we define women's interests as diverse. We adhere to a wider definition which includes both feminist and 'gendered' women's interests (Celis and Childs 2014). Hence, we assume that substantive representation depends on (critical) acts which foster women's heterogeneous group interests.

The second dimension considers responsiveness and account-giving. We study both 'political' and 'policy' aspects of responsiveness. The first relates to the level of congruence between women's preferences and those of parties/MPs; the second measures congruence between women's preferences and policies. When linking these together, we do not a priori define women's interests in a feminist direction and give preference to measures that account for the heterogeneity of women's preferences (hence, we compare variances in distributions and not median scores, see below). In terms of accountability mechanisms, our focus is on collective mechanisms, which are in place when governments regularly consult with women's organizations and societal actors, and incorporate their views in policymaking.

While the two dimensions form the conceptual cornerstone of the SRI, they are measured through several indicators which are derived from the extant literature. We discuss these in the next section.

Indicators of the Substantive Representation Index

The two dimensions – interest articulation and responsiveness/accountability – are operationalized through eight *indicators*, five of which are associated with the first dimension and three with the second dimension. The selection includes indicators that can be meaningfully compared across countries. In order to optimize data availability, comparability and accessibility in different countries, we give priority to indicators that are reasonably available in a larger set of European countries, preferably also over time. This also means that we give preference to readily available comparative data(sets), rather than collecting too much data ‘from scratch’, as the latter is often not practically and financially possible. The Table in the Online Appendix 2 provides an overview of the selection of indicators as well as the data that would be used to assess each indicator². Information that cannot be derived from existing datasets, in particular some information on government accountability, will need to be collected by means of a new data collection effort. Ideally, the SRI measures the status of women’s substantive representation on a yearly basis, to track changes over time with regular intervals and to allow for the comparison between election and non-elections years. Hence, most indicators that are included in the SRI, allow for annual measurements.

² The suggested data sources are easily available in a European context, but other countries might explore different data sources for obtaining information on the different indicators. The SRI can be flexible in terms of the data sources that are used, and for the inclusion of new data sources should they emerge.

For the first dimension of the SRI, i.e. *interest articulation*, the following indicators are examined per country:

- [1] *Civil society action* – both the capacity of women’s organizations to formulate policies, and the extent to which they are prevented from taking part in civil society. Information can be obtained from the V-Dem (Varieties of Democracy) dataset³ which includes expert survey questions on the political participation of women and the role and effectiveness of women’s civil society organizations.
- [2] *Party activity* – the extent to which parties mention women’s interests (‘feminist’ and ‘gendered’) or propose actions aimed at achieving women’s substantive representation in their party manifestos. These data can be collected from the Comparative Manifesto Project⁴ and the Political Documents Archive⁵.
- [3] *Parliamentary activity* – the extent to which parties and MPs mention women’s interests or actions for achieving women’s substantive representation in parliamentary documents, in particular bill proposals and parliamentary questions. Documents by which parties and MPs signal priorities and set the agenda are selected, although the specific indicators may vary slightly by country based on data availability in the national parliamentary databases.
- [4] *Government action* – the extent to which governments mention women’s interests or actions aimed at achieving women’s substantive representation in their coalition agreements and declarations. These data can be collected from the Political Documents Archive⁶.

³ <https://www.v-dem.net/en/>

⁴ <https://manifesto-project.wzb.eu/>

⁵ https://www.mzes.uni-mannheim.de/projekte/polidoc_net/index_new.php?view=home

⁶ https://www.mzes.uni-mannheim.de/projekte/polidoc_net/index_new.php?view=home

- [5] *Specially devoted bodies* – the extent to which parliaments or governments have established dedicated bodies, with significant resources and decision-making power, for the representation of women’s interests (e.g. women’s caucuses or networks, committees, women’s policy machineries, ...). This can be collected from the Inter-Parliamentary Union (IPU)⁷ and European Institute for Gender Equality (EIGE)⁸ databases which both offer data on institutional bodies/sources dedicated to the promotion of women’s interests.

Each indicator receives a score of 0 (low), 0.33 (medium low), 0.66 (medium high) or 1 (high).

The index for the first dimension then becomes:

SRI_1 (interest articulation) = (Sum [1]-[5]) / 5. This results in an index between 0 and 1. A score of 0 refers to the lowest level of interest articulation, and a score of 1 refers to the highest level of interest articulation, in a given society in a given year.

For the second dimension of the SRI, i.e. *responsiveness*, we examine the following indicators per country:

- [1] *Political responsiveness* – the extent to which the policy positions/preferences of elected MPs/parties are congruent with those of women citizens. We give preference to the ‘many-to-many’ approach comparing the distribution of women’s preferences to the distribution of the preferences of parties/representatives (Golder and Stranski 2010, Dinger, Kroeber and Fortin-Rittberger 2018). Comparing similarities in distributions allows to assess whether the diversity/variance of women’s preferences is reflected in parliament. This item uses public opinion surveys (e.g. European Social Survey,

⁷ <https://www.ipu.org/>

⁸ <https://eige.europa.eu/>

European Values Study) for data on women's preferences, and elite surveys (e.g. the Chapel Hill Expert Survey⁹ and Comparative Study of Electoral Systems¹⁰) for data on parties/elites' preferences.

- [2] ***Policy responsiveness*** – the extent to which women's preferences are reflected in policy outcomes. Because comparing across a variety of policies is not feasible, we focus on one indicator, namely government redistributive welfare spending, which has been used in previous cross-national research (Dassonneville et al 2021), and is widely available for European countries over time. The policy dimension is gendered (Bolzendahl and Brooks 2007), and women's and men's strategic interests in relation to welfare spending might differ (Annesley 2010). Because we cannot compare distributions of the policy variable, we examine to what extent the policy is in line with what the majority of women prefer (Reher 2018)¹¹, using OECD and public opinion data.
- [3] ***Accountability*** – the extent to which parliaments and governments take action to inform, exchange views and consult with women's organizations and women societal actors in policymaking. For this item, we would rely partly on data from the European Institute for Gender Equality (EIGE), but additional data will need to be collected through an expert survey in a second phase.

⁹ <https://www.chesdata.eu/>

¹⁰ <https://cses.org/>

¹¹ We acknowledge the limitations that come with this approach. The first is that it risks overlooking minority women's preferences when they diverge from the majority. Depending on data availability in the different countries, interactions between gender and social class, ethnicity or age can be calculated. The second limitation is that by using congruence measures, we implicitly accept that public opinion might steer substantive representation away from more emancipatory goals linked to social justice, democratic empowerment, and gender equality, which is not uncontested in the literature on women's substantive representation.

Each indicator again receives a score of 0 (low), 0.33 (medium low), 0.66 (medium high) or 1 (high). This means that: SRI_2 (responsiveness) = (Sum [1]-[3]) / 3, which results in an index between 0 (low responsiveness in a given society in a given year) and 1 (high responsiveness in a given society in a given year).

The final composite index makes: $SRI = (SRI_1 + SRI_2) / 2$.

Each indicator would in an initial stage receive the same weight in the index. We opt for equal weights because they are a commonly used method and because there is currently no uniform way for weighing the indicators in a differential way in all the countries. In a next step, statistical techniques or expert advice (e.g. through an expert survey) can be used to further finetune the weights. If necessary, the scores for some items will be corrected for relevant country characteristics that might influence opportunities for substantive representation in general, including year of first democratic election, year of female suffrage and GDP.

It should of course be clear, that no set of indicators can fully capture the complexity of women's substantive representation, nor are we arguing that this index is a panacea to the problem. What we do argue, however, is that using a composite index such as the SRI, which relies on existing data, to approximate the level of substantive representation in a given society at a certain time, offers the ability to 1) compare societies with others, 2) compare the same society over time, 3) do so in a context of limited resources and 4) foreground the multifacetedness of substantive representation in Europe. This can then reveal interesting trends, outliers, or sharp changes, which can call for further, deeper examination of specific cases.

Discussion and future research

This paper proposed a theoretically developed new composite index, the ‘Substantive Representation Index’ (SRI), to study women’s substantive representation comparatively. In this final part, we briefly reflect on the usefulness of such an index and on the paths for future research.

The usefulness of a composite index such as the SRI is threefold. First, due to its systematic and comparative outlook, its engagement with the multifacetedness of substantive representation, and its overall reliance on readily available data, the SRI can be used to study women’s substantive representation in different countries in Europe. Second, the SRI, which will be gathered to reflect change over time, also allows for monitoring change within systems in this regard, thereby complementing other monitoring efforts of women’s political representation and empowerment (e.g. Alexander, Bolzendahl and Jalalzai eds. 2018). The resulting data will be cross-sectional time-series data. Third, the SRI can furthermore be used as a separate indicator in comparative databases of political representation and democratic governance, which often lack systematic indicators of substantive representation of social groups.

The next obvious step is to refine the measurement strategy, collect the necessary data for empirically testing the index, and mapping patterns in the determinants of SRI across and within countries, and over time.

Once the data collection is completed, there are multiple analytical routes to take. Research can study SRI as a dependent variable and try to explain why some countries score higher than

others. Research can focus on the effect of a variety of macro-social conditions, including the level of women's descriptive representation, the presence of left-wing parties in power, or mass attitudes. It can also study the role of formal institutions (such as the electoral and party system, systems of interest groups, welfare state regimes) and/or informal institutions (such as gendered norms of appropriateness regarding women's interests in politics and opposition to gender equality) in supporting or resisting change in women's substantive representation (Thomson 2018). Studies can furthermore study the effects of the presence of 'critical actors' (Childs and Krook 2009) as 'agents of change', or the role of veto players as 'agents of inertia'. Such analyses would in turn allude to steps towards achieving better representation, which would decrease inequality across societies or within societies across time.

The SRI can also be used as an independent variable, for instance to assess whether higher or lower levels of SRI influence women's symbolic representation (e.g. public trust in politics or perceived legitimacy). Given that the different indicators of SRI focus on the inclusion of women's interests in the political process, studies should also consider how SRI scores relate to policy outcomes and indicators of good governance, social justice, and democratic and economic development more broadly. When doing so, the SRI will also be of use to non-academic actors, including policy actors, civil society, and practitioners in the governmental and non-governmental sphere.

Finally, future research might also consider whether, to what extent and how the SRI can be extended to other traditionally disadvantaged groups in politics, including, but not limited to: ethnic and racial groups, age groups, LGBTQI, social class, (dis)abled citizens,... Much value also lies in finetuning measurements for the inclusion of intersectionality perspectives, which was not the focus in the current study but requires further thought nevertheless.

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